

Program Policy

Fishery Products Treated with Carbon Monoxide and Filtered Smoke Gas

In 1997, the USDC Seafood Inspection Program became aware of a process that employs a filtered wood smoke that at least one processing company, Hawaii International Seafoods, Inc., termed "tasteless smoke" (TS). The purpose of its application is to retard the development of the brown color that rapidly occurs in tuna flesh after it has been cut. Although carbon monoxide (CO) is a component of the "tasteless smoke", its concentration is similar to that found in normal wood smoke. Unlike some other processes that result in the color of the product being enhanced or brightened and fixed through the direct use of CO at significantly higher concentrations and/or longer exposure times, this process, when used with appropriate controls, reportedly does not enhance the natural flesh color of tuna, and the color of the flesh eventually degrades over time. There is no evidence to suggest that "tasteless smoke" poses a health risk to the consumer from the ingestion of treated product.

On September 3, 1998, Richard Cano signed a policy indicating that only seafood treated with "tasteless smoke" gas from verified facilities named in the policy would be permitted to be lot inspected and bear our mark once it arrived in the United States. The list of accepted facilities would be updated as necessary.

In May 1999, FDA issued Import Bulletin 16B-95 which included instructions that tuna treated with "tasteless smoke" or CO should be:

- labeled as processed foods that have been treated with CO or TS,
- not misrepresented as fresh frozen seafood by their label, and
- near normal in flesh color

As a result of Import Bulletin 16B-95, the USDC Seafood Inspection Program policy was expanded to include facilities treating products with carbon monoxide mixtures.

Hawaii International has provided data to support their view that "tasteless smoke" is GRAS by submitting a GRAS notification document to FDA's Office of Premarket Approval. On March 10, 2000 FDA has responded that the agency has no questions at this time regarding the conclusion of Hawaii International that tasteless smoke is GRAS for use on raw tuna, before it is frozen, to preserve its taste, aroma, texture, and color. The agency has not, however, made its own determination regarding the GRAS status of this use of tasteless smoke. The FDA response further reiterates that any firm who markets tuna that has been preserved with tasteless smoke is responsible for ensuring that such tuna is neither adulterated nor misbranded under sections 402 and 403 of the Federal Food, Drug, and Cosmetic Act.

USDC Seafood Inspection Program Policy

USDC has implemented a policy within its voluntary Seafood Inspection Program to lot inspect and certify tuna products treated with filtered wood smoke or carbon monoxide only if those products originate from firms that USDC has verified employ acceptable process controls. The products must also be in compliance with all other applicable legal and regulatory requirements.

Verification Protocol

The verification protocol encompasses several parameters. First, the firm's HACCP and sanitation operation are evaluated for compliance to FDA regulations, in particular 21CFR Part 123. Color readings are taken of a sampling of tuna steaks using a

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HunterLab color difference meter. Steaks are sampled with readings taken after the first cut, after exposure to the gas, and at thirty, ninety, and one hundred fifty-day intervals in frozen storage. After frozen storage, at each of the intervals, the steaks are thawed and stored chilled under conditions similar to that found in retail stores. Each day for the next five days, the steaks are analyzed for color readings and sensory indicators. All readings are charted and analyzed using HunterLab software. Photographs are taken at each stage of one steak that has been treated and a control.

Samples of the gas are also taken at the source and analyzed for various constituents, including carbon monoxide. Histamine analyses are also performed on representative product samples.

Audits of production facilities are performed twice per year.

Color Standard Development

In an effort to determine criteria to objectively describe "near normal in flesh color", the USDC Seafood Inspection Program is collecting color data at each facility. This data will be used to develop a process/color specification that will be evaluated with industry assistance. Additional tests are underway to evaluate the effect of filtered smoke and carbon monoxide on tuna at varied stages of deterioration.

The standard developed is not a color chart or a color plate by which to compare the product for acceptance. It is instead a measurement by a color meter and a mathematical representation of the color necessary to be considered acceptable. The color standard is under final review and will be announced publicly at the national meeting of the Association of Food and Drug Officials June 16, 2002 in Portland, Oregon.

Approved Facilities

Attached are the facilities currently in compliance with this policy. This list supersedes the list of January 30, 2002 and will be replaced as new facilities are added or deleted. Unless indicated, all vacuum-packed product forms must be in the frozen state. The Program is aware that other fish species are being treated with the process, such as tilapia, swordfish, and mahi-mahi. It is planned that color data will be collected on these species as well. Until then, the Program will not hinder commerce by limiting the lot inspection to only tuna products from these facilities, as long as all other USDA and USDC requirements are met. Questions should be directed to:

USDC Seafood Inspection Program
1315 East-West Highway, F/SI
Silver Spring, Maryland 20910
Phone: 301-713-2355
FAX: 301-713-1081
E-Mail: Kenneth.Aadsen@noaa.gov
E-Mail: Steven.Wilson@noaa.gov

Firms new to the list are indicated with a  symbol.

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Facilities Utilizing Carbon Monoxide Gas Mixtures

Pt. Balinusa Windumas

Jalan Ikan Tuna 2
Pelabuhan Benoa, Denpasar
Bali, Indonesia
Phone: 62361-722688
FAX: 62361-723636
E-Mail: balinusa@dps.centrin.net.id

Facilities Utilizing Filtered Wood Smoke

AFI International Trading Corporation

Tambler
General Santos City, Philippines
Phone: 632-838-4901
FAX: 632-838-4675
E-Mail: tonym@netasia.net

Angel Seafood Corporation

Tambler
General Santos City, Philippines
Phone: 6383-553-8848
FAX: 6383-552-2794
E-Mail: amerasia@mkt.webling.com

Citra Mina Seafood Market

004 Cabe Subdivision, Lagao Road
Tambler
General Santos City, Philippines
Phone: 6383-552-8136
FAX: 6383-552-2654
E-Mail: mgtr@gsc.webling.com

CV. Lautan Niaga Jaya

Perum Prasarana Perikanan Samudra
Jalan Muara Baru Ujung Blok B 168
Jakarta Utara – 14440
Phone: 6221-661-4154/661-7874/6669-1965
FAX: 6221-661-9641
E-Mail: lautanniaga@cbn.net.id

East Asia Fish Company, Inc.

EAFCI Building
Davao Fish Port Complex
Daliao Toril District
Davao City, Philippines
Phone: 6382-291-3397
FAX: 6382-291-3398
E-Mail: stjames@epic.net

Evergreen Enterprises

#2 Tomas Claudio St.
7000 Zamboanga City
Philippines

Plant Location

Philippine Kingford, Inc.
Tambler
General Santos City, Philippines
Phone: 6383-380-7301
FAX: 6383-380-7333
E-Mail: kingford@pacific.net.ph

JACSS Seafood Venture 

Dole Compound, Calumpang
General Santos City, Philippines
Phone:
FAX:
E-Mail: samuel@gs-link.net

PescaRich Corporation

Espina Industrial Center, Labangal
General Santos City, Philippines
Phone: 949-830-5509 (USA)
FAX: 949-830-5509 (USA)
E-Mail: rpjafriend@home.com

Philippine Kingford, Inc.

181 Roxas Boulevard, Baclaran
1700 Paranaque, Metro Manila
Philippines
Phone: 6383-380-7301
FAX: 6383-380-7333
E-Mail: kingford@pacific.net.ph

Phillips Seafood Philippines Corp.

2nd Floor Refrigeration Building
Fish Port Complex
Brgy. Tambler, General Santos City
Philippines 9500
Phone: 6383-302-5957
FAX: 6383-302-5958
E-Mail: phillips@gsc.webling.com

FrigoLab "San Mateo"

Via San Mateo, Km 4 ½
Manta, Ecuador
Phone: 593-5-628701
FAX: 593-5-628688

Mommy Gina Tuna Resources

004 Cabe Subdivision, Lagao Road
Tambler
General Santos City, Philippines
Phone: 6383-552-8136
FAX: 6383-552-2654
E-Mail: mgtr@gsc.webling.com

Philippine Cinmic Industrial Corp.

C/O 181 Roxas Boulevard, Baclaran
1700 Paranaque, Metro Manila
Philippines

Plant Location

Philippine Kingford, Inc.
Tambler
General Santos City, Philippines
Phone: 6383-380-7301
FAX: 6383-380-7333
E-Mail: kingford@pacific.net.ph

Phillips Seafood Indonesia 

Sulawesi Plant
Jalan Lemelleng #42
Bojo Baaru, Mallusetasi
Baru, Sulawesi Selatan
Pare Pare, Indonesia
Phone: 62-421-21105

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PT. Bonecom

JL Muara Baru Ujung, Blok L, No. 1
Jakarta Utara 14440, Indonesia
Phone: 6221-661-6686
FAX: 6221-662-6686
E-Mail: tjandra@bonecom.co.id

PT. Fajar Cakrawala Sumbindo

Jalan Ikan Tuna III
Pelabuhan Benoa Bali
Indonesia
Phone: 62361-721386
FAX: 62361-724009
E-Mail: sumbindo@indo.net.id

PT. Hatindo Makmur

Kompleks Pelabuhan Benoa
Jalan Ikan Tuna III No. 1B
Benoa, Denpasar
Bali, Indonesia 80223
Phone: 62361-724095
FAX: 62361-724097

PT. Intimas Surya

Jalan Ikan Tuna Blok B2
Pelabuhan Benoa
Bali, Indonesia
Phone: 62361-724246
FAX: 62361-721159
E-Mail: jorgih@indo.net.id

PT. Intisamudera Citra Perkasa

Jalan Ikan Tunaraya Blok No. 1
Pelabuhan Benoa, Denpasar Bali
Indonesia
Phone: 62361-724526
FAX: 62361-724527
E-Mail: shihchihhsing@kimo.com

PT. Lucky Samudra Pratama

Jalan Muara Baru Ujung
Blok F No.1
Jakarta Utara, 14440
Indonesia
Phone: 6221-662-3275
FAX: 6221-662-3276
E-Mail: misai@cbn.net.id

PT. Makmur Jaya Sejahtera

Jalan Ikan Tuna Blok B2
Pelabuhan Benoa
Bali, Indonesia
Phone: 62361-724246
FAX: 62361-721159
E-Mail: jorgih@indo.net.id

PT. Minasakti Kichitomindo

Kompleks Pelabuhan Perikanan Samudera
Jakarta
Jalan Dermaga Timur Kel. 2 No. 15
Penjaringan, Jakarta Utara 14440
Indonesia
Phone: 6221-669-6076
FAX: 6221-669-6056
E-Mail: minasakti@link.net.id

PT. Satu Enam Delapan Benoa

Kompleks Pelabuhan Benoa
Jalan Ikan Tuna III No. 1B
Benoa, Denpasar
Bali, Indonesia 80223
Phone: 62361-724095
FAX: 62361-724097

**PT. Segarindo Mina Manunggal**

Kompleks Bandengan Megan
Jalan Bandengan Utara
Kav 81, Blok B, No 10
Jakarta 14440, Indonesia
Phone: 6221-667-0505
FAX: 6221-662-5825
E-Mail: hartonot@indo.net.id

Santa Cruz Trading

Dole Compound, Calumpang
General Santos City, Philippines
Phone: 6383-553-5387/4102/4103
FAX: 6383-553-2194
Home: 6383-552-9797
Cell: 6383-0918-901-5077
E-Mail: stacruz@mozcom.com

Sea Source Corporation

37 Annapolis Street
Room 203
Greenhills, San Juan
Metro Manila, Philippines 1505
Phone: 632-723-8799

Plant Location

Angel Seafood Corporation
Tambler
General Santos City, Philippines
Phone: 6383-553-8848
FAX: 6383-552-2794
E-Mail: amerasia@mkt.webling.com

Truc An Co., Ltd.

Lot A12-13
Suoi Dau Industrial Zone
Dien Khanh District
Khanh Hoa Province, Vietnam
Phone: 8458-743173
FAX: 8458-821175
E-Mail: truc-an@dng.vnn.vn

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